



Lindab Doorline

Owners manual
Dock leveller

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1. General

1.1 Use of the manual

This manual describes how Lindab dock levellers are to be operated. Which safety measures are to be observed, including a description of the dock leveller as well as how defects may be solved. This description has been made for the use by the operator of the dock leveller, and indicates that after reading the manual you shall be capable of operating the dock leveller, however not authorised to solve dock leveller-related defaults. With regard to technical defaults you are to contact a qualified engineer.

Text layout

Text in Italic: information to which extra attention is to be given.

Text in bold: important information.

Symbols used



Warning: Should instructions be preceded by this symbol, this indicates a warning regarding the possible risk of damaging the dock leveller or risk regarding occurring defaults should the instructions not be observed to the letter.



Should text be preceded by this symbol, this indicates a warning against the risk of physical injury should the instructions not be observed to the letter.

1.2 Operator/Technician

User

The user is each person handling the dock leveller, in any way.

Operator

The operator is each person who is, under normal circumstances, involved with handling the dock leveller. The operator is to be familiar with all stipulations regarding safety as detailed in this manual. The operator is not to perform any repair activities on or to the dock leveller.

Technician

The technician is a technician qualified to perform technical repairs on or to the dock leveller. He/she is qualified to perform mechanical and/or electro technical repairs to the system(s) and/or maintenance activities.

1.3 Guarantee

The guarantee conditions, as included in the General Conditions of Sales and/or Guarantee, shall be deemed legally null and void should:

1. Maintenance works and/or repairs have been performed whilst not observing the instructions to the letter;
2. Assembly/repair works have not been performed by a qualified engineer;
3. Other than original spare parts have been used;
4. Non-judicially, unjust and/or negligent handling of the materials delivered may be proven;
5. The dock leveller has been used for other purposes than for which it has been designed and constructed.

1.4 After Sales

Should defaults or problems occur or should you have any questions, please contact Lindab.

1.5 Declaration of Conformity and CE-marking

Loading Systems International B.V.,
Loodsweg 1, 8243 PH LELYSTAD,
the Netherlands

Herewith declares at her own responsibility that the products:

Dock leveller 232M, 232J, 232M100
Dock leveller 233M, 233J, 233M100,
233NG

- Comply with the Directives regarding Machinery (Directive 2006/42/EC, as per the last modification).
- Comply to the conditions of the following additional EEC directives: Electromagnetic Compatibility Directive 2004/108/EEC and subsequent amendments; Low Voltage Directive 2006/95/EEC and subsequent amendments.
- Fully comply with the harmonized EC-Directive: EN 1398: 2009.

2. Safety

2.1 General



Notwithstanding all safety measures as ensured by Lindab the following aspects are to be taken into consideration:

- During the operation of the dock leveller, the surroundings are to be observed (if possible).
- One is not to insert any objects between, underneath or into the dock leveller or any moving parts of the dock leveller.
- Each person is to ensure a certain distance during the movement of the surface of the dock leveller.
- The direction of the movement of the surface of the dock leveller should not be blocked in order to ensure free movement.

The manufacturer cannot be held liable for any handling or works, which have been performed by a non-authorised, non-qualified or not sufficiently qualified user, operator or technician.

2.2 Regulative/non-regulative use



Safety precautions

- Prior to operating the dock leveller for the first time, the operator is to read the full contents of the pertaining manual.
- The dock leveller is to be used in accordance with the instructions. Any other use could result in unpredictable circumstances or occurrences and is therefore strictly forbidden.
- The instructions as stipulated in the manual are to be observed to the letter.
- Always disconnect the power (regarding electrical operated dock levellers only) prior to working on the system. Always ensure that no unauthorised activation of the power can be performed.
- Special attention is to be given to ensure that the control unit is always closed during operation (regarding electrical operated dock levellers only).
- Only a technician, who has completed an electro technical course, may open the control unit.



“Safety” comes before “Operation”.

2.3 Safety precautions with regard to the dock leveller



Safety precautions

- The dock leveller has been designed and produced in accordance with the applicable EC-directives. The manufacturer has given the utmost attention to the safety of the dock leveller with regard to safety precautions (emergency-stop, door/dock leveller security-device).
- Periodically (1x per month) an inspection is to be carried out regarding whether or not the safety precautions are compromised and that they still perform.
- Always disconnect the power (regarding electrical operated dock levellers only) prior to working on the system. Always ensure that no unauthorised activation of the power can be performed. Moreover the working area is to be fenced off to clearly indicate the working area.

2.4 Obligatory annual inspection



In order to comply with the statutory regulations the user/operator is to have the dock leveller inspected once per year as a minimum, if required the dock leveller is to be aligned by a fully authorised technician.

3. Description of the dock leveller

3.1 Description of the system



The dock leveller and its movable upper deck and lip has been designed and produced to bridge the difference in height between the loading bay and vehicle floor. This enables the loading and unloading of vehicles. Depending on the model, the movements (lifting, in and out) are activated manually or by means of a push button.

- Never exceed the lifting capacity for which the dock leveller has been designed and produced.
- Only use the dock leveller for the purpose to which it has been designed and produced.
- Never leave a lifting device (fork-lift truck or pallet-truck, etc.) unattended on the dock leveller.

3.3 Assembly, installation, inspections



The dock leveller is to be assembled by a technician approved by Lindab. Prior to the initial use of the dock leveller, the appointed technician has inspected the safety and the operation of the dock leveller, and has released it for use to the appropriate user or operator. The safety of the dock leveller-system is to be inspected once per year as a minimum. This inspection is to be performed by a authorized technician and all inspections shall be in accordance with the safety precautions.

3.2 Technical data

Top-deck:	Steel, durbar execution
Sub-frame:	Profiled steel, self supporting
Lip-angle:	4 degrees for 232M(100), 5 degrees for 233M(100)/233NG
Protective devices:	Hydraulic safety stop with integrated hose burst valve in cylinder
Motor:	230 V eller 400 V
Frequency:	50 Hz
Hand-return:	Standard
Control panel:	Emergency stop in accordance with EN 418, 230 V/400 V, 50 Hz
Outside diameter main cylinder:	65 mm
From L2 = 4.500 mm:	110 mm
233NG:	2 × 50 mm
Outside diameter lip cylinder:	45 mm for 232, 50 mm for 233

3. Description of the dock leveller

3.4 Operation

Electrical operation

The control panel is positioned as such that the area where any risk could occur can be observed during operation of the dock leveller.

Hinged lip:

- The control panel is provided with 2 control functions for “Up” and “To rest position (R)”.
- As long as the control function is activated the upper deck shall be lifted.
- As soon as the upper deck has reached the top level, the flap shall rotate horizontally.
- As soon as the control function has been released, the upper deck shall be lowered immediately and as such be positioned into the vehicle. The flap support is to be 100 mm as a minimum.
- The control function “Up” is used as a dead-man function which means that the lifting of the upper deck or the rotation of the flap stops immediately after releasing the button.
- In order to convey the dock leveller to the rest position once again, the control function “To rest position (R)” is to be activated, as a result of which the upper deck shall be lifted and the flap shall be in vertical position. Subsequently the upper deck shall lower to the rest position of the upper deck.
- Check the interlocking of the flap in the flap catchers.

Should, after a certain pulse, the dock leveller not activate a certain function, it could be that one of the described safety precautions has

been activated. In this case, please check. Should the latter not be applicable, please refer to Chapter 3.5: Troubleshooting.

Sliding lip:

- The control panel is provided with 4 control functions, being “Up”, “Extend”, “Retract” and “To rest position (R)”.
- As long as the control function “Up” is activated, the upper deck shall move to a higher level. 1.5 seconds after the function is released the deck will start lowering.
- As soon as the upper deck has reached the upper level, the control function “Extend” is to be operated. The deck will raise little before the lip is extended and will not lower as long as the control function is used.



The control function “Extend” can only be used after the control function “Up” has been used for at least 2 seconds.

- The movement of the flap shall stop as soon as the control function has been released. The upper deck shall start lowering after 1.5 seconds, resulting in the position of the flap on the vehicle floor. The flap support is to be 100 mm as a minimum.
- It should be safeguarded that there are no obstacles under the flap while resting on the vehicle floor. Only the flap may rest on the vehicle floor!**

- Adjusting the flap support can be done easily afterwards by using the button “Extend” or “Retract”. When using one of these buttons the deck will always be lifted first for 1.5 seconds. After this movement the in- or outward movement will start.

- In order to convey the dock leveller to the rest position once again, the control function “To rest position (R)” is to be activated resulting in the lifting of the upper deck. As soon as the upper level has been reached the lip is retracted. After this the upper deck will return to the rest position.

Should, after a certain pulse, the dock leveller not activate a certain function, it could be that one of the described safety precautions has been activated. In this case, please check. Should the latter not be applicable, please refer to Chapter 3.5: Troubleshooting.

Emergency stop:

Activating: set main switch to “zero”

Unlocking: set main switch to “1” and operate the control function (“Up”) during a short period of time only.



All types of control include the major and dominant function of the emergency stop system, as a result of which the dock leveller with an interrupted contact may be de-activated (regarding electrical operated dock levellers only).

3.5 Troubleshooting

Should the dock leveller not react immediately upon the activation of the control element, or should the dock leveller for some reason halt, the following procedure is to be observed:

- Check if an obstacle is present within the direction of moment, which prevents the freedom of movement of the dock leveller. Remove the object if so required.
- Check if one or various safety precautions have been activated.

3. Description of the dock leveller

- Check the presence of a load on the upper deck. Remove if so required.

Should the defects not be solved, please contact Lindab Technical Service and inform them accordingly. The user may never perform overriding the set safety precautions. Other works may not be performed by the user for this could mean termination of the guarantee.

3.6 Maintenance works

Complicated maintenance works require qualified knowledge. For your own safety we strongly advise you to contact your supplier if complicated maintenance works are required. Skilled personnel within the own organisation can perform the following maintenance:



During maintenance on a dock leveller always use the maintenance-check!

3.6.1 Preventive maintenance 232M/232M100

Weekly:

Once a week all functions of the dock leveller must be tested, even if it has not been used. This check can easily be performed by putting the dock leveller through its cycle several times.

Monthly:

Every month a number of grease points must be checked (see picture on the next page), cleaned and greased and **the fixation of the axles should be controlled (see for instance photographs picture 1 and picture 2):**

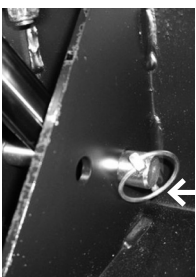
1. Back hinges upper deck
2. Pivot points on main cylinder (in front beam and upper deck)
3. Spring unit on side lips (option)

Every two months:

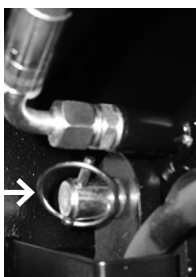
Check the oil in the tank. Move the dock leveller in its lowest position and switch off the power. If there is an open pit you can easily crawl under the leveller. The powerpack is mounted on the upper deck. Use a screw driver as a dip stick to determine the oil level. The oil level must be not lower than 20mm below the filling opening.

Note!

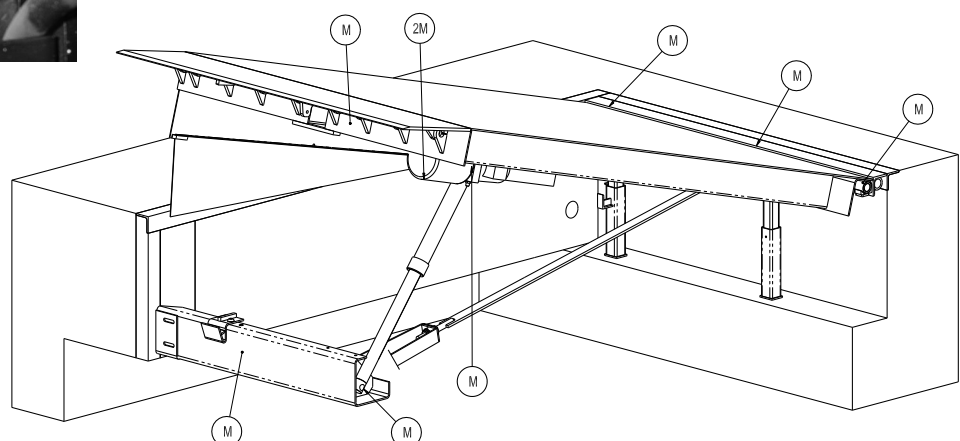
Only one type of oil must be used in the hydraulic system. Use only Univis J13 or equivalent.



Picture 1



Picture 2



3. Description of the dock leveller

3.6.2 Preventive maintenance 233M/233M100/233NG

Weekly:

Once a week all functions of the dock leveller must be tested, even if it has not been used. This check can easily be performed by putting the dock leveller through its cycle several times.

Monthly:

Every month a number of grease points must be checked (see picture on the next page), cleaned and greased and **the fixation of the axles should be controlled (see for instance photographs picture 1 and picture 2 shown at the 232 above):**

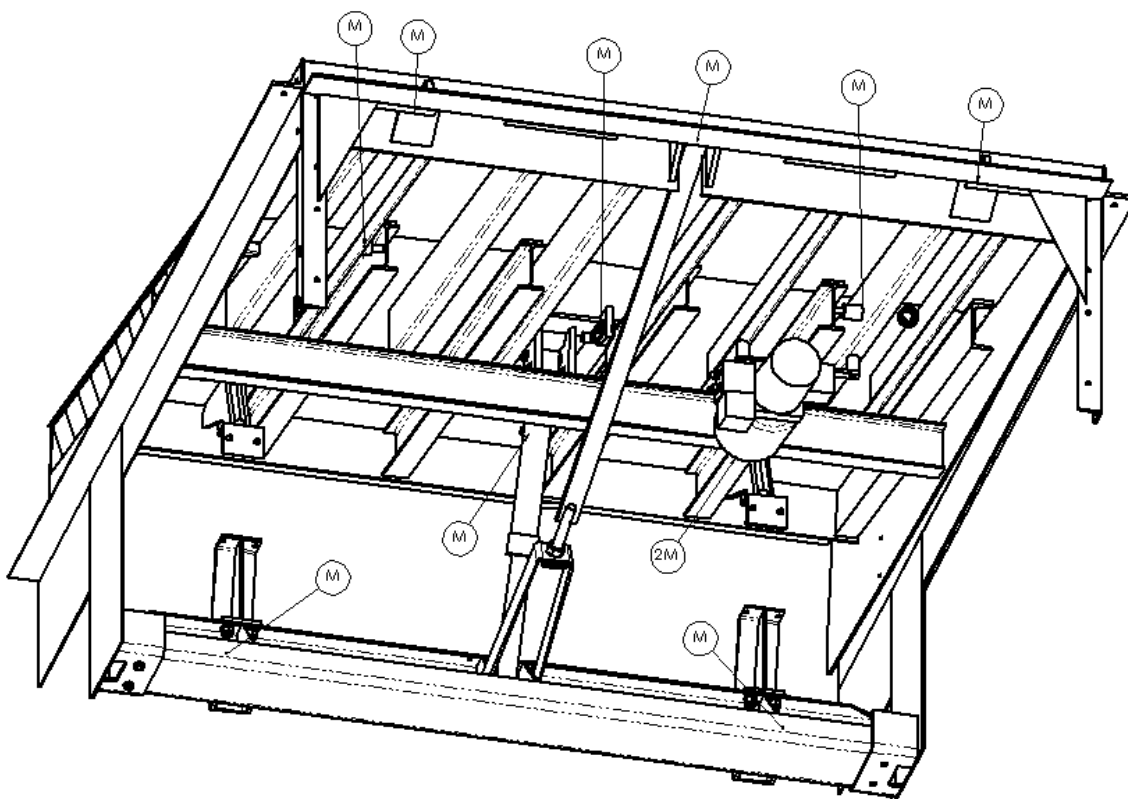
1. Back hinges upper deck
2. Pivot points on main cylinder (in front beam and upper deck)
3. Pivot points on lip cylinder
4. Guide blocks lip (round nylon)
5. Spring unit and guide system side lips (option)

Every two months:

Check the oil in the tank. Move the dock leveller in its lowest position and switch off the power. If there is an open pit you can easily crawl under the leveller. The powerpack is mounted on the upper deck. Use a screw driver as a dip stick to determine the oil level. The oil level must be not lower than 20mm below the filling opening.

Note!

Only one type of oil must be used in the hydraulic system. Use only Univas J13 or equivalent.



3. Description of the dock leveller

3.6.3 Annual maintenance

Annual maintenance works to loading platform systems may be implemented by authorised and skilled persons only. During a service visit, the dock leveller must be carefully inspected on malfunctions or defective parts. Inspect all mechanical, hydraulic and electric parts.

After inspecting the leveller, operate the leveller several times to determine if all functions work properly. If not, use this manual to determine the malfunction and to solve or repair the leveller.

3.7 Alignment

Upon assembly the dock leveller system shall be aligned as such that the settings comply with the agreed upon requirements. The user is not to initiate any modifications to the settings. Should any modifications be applicable at a later stage, the supplier is to be contacted after which these shall be modified by the supplier.

Should any modifications be performed with regard to the settings as set by the manufacturer, either by the user or by any third party, termination of the guarantee could be a result of unauthorised modifications.

3.8 Out of operation



In order to be able to perform maintenance works (by a technician) or should the dock leveller system be out of order for a longer period

Annual maintenance Mechanical parts:

Check all welds on cracks. If a weld is cracked: block the leveller. The leveller can not be used. Consult your supplier about safety risks and/or how to repair the weld. The leveller can be used again after the weld is repaired.

Check, clean and grease hinges, pivot points and guide ways.

Check the leveller for corrosion. Clean corroded parts and use primer and paint or zinc spray to protect the part. When parts are seriously corroded, replace the part.

Check screw connections on front beam, tie rod and upper deck. Tie the screws if needed.

Annual maintenance Hydraulic parts:

Check all cylinders, connections and hoses on leaking. Replace defective parts.

Check oil level. Only one type of oil must be used in the hydraulic system. Use only Univis J13 or equivalent.

Annual maintenance Electrical parts:

Check all cables. The isolation of the cables must be undamaged. Replace damaged cables, because they are causing a high safety risk.

Check all connections on the solenoids at the power pack and in the control box. Loose contacts or bad connections can cause malfunction.

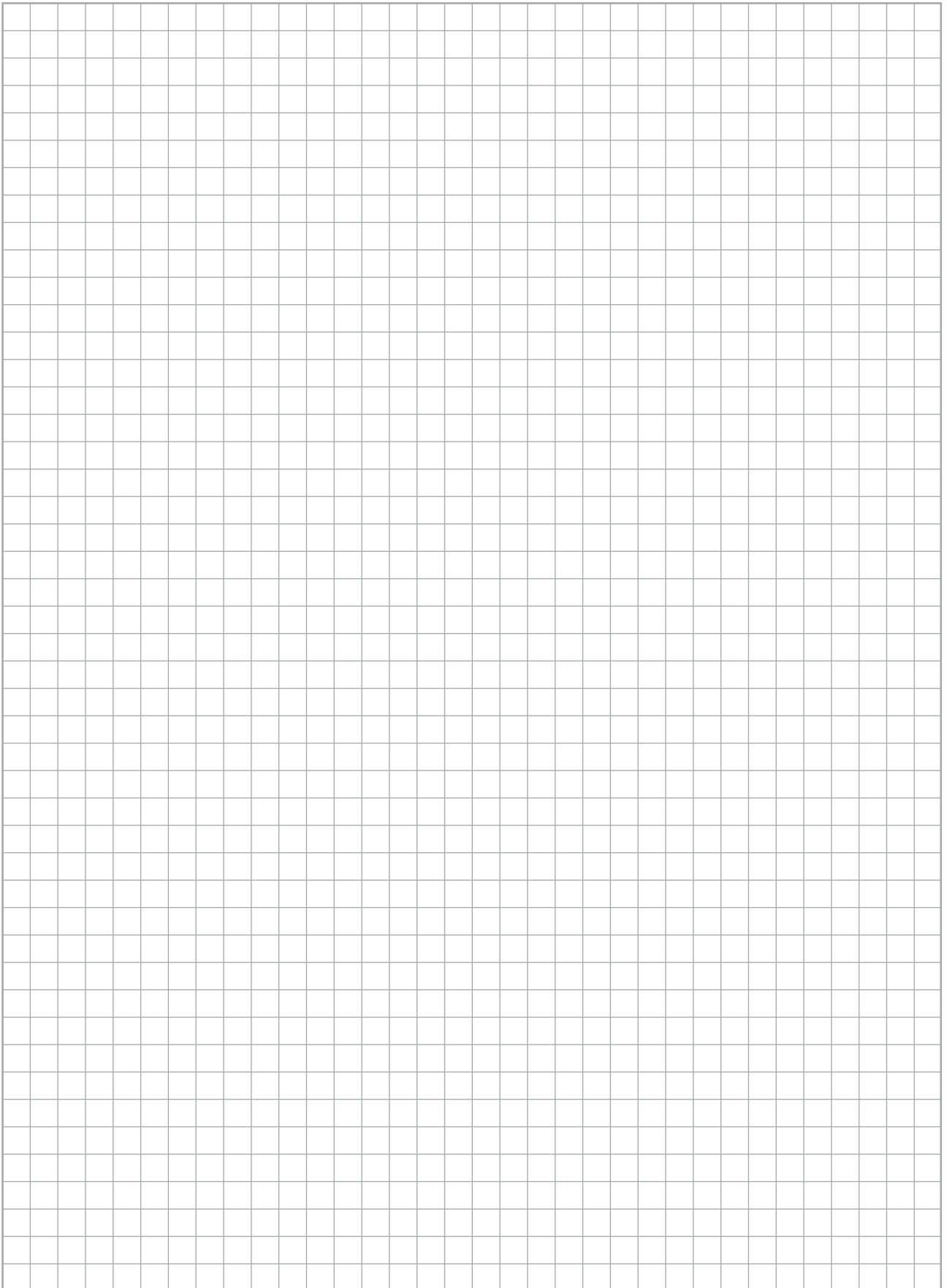
of time, the power is to be disconnected (regarding electrical operated dock levellers only) and it should subsequently be safeguarded against unintended and unauthorised use.

3.9 Disassembly, removal and processing

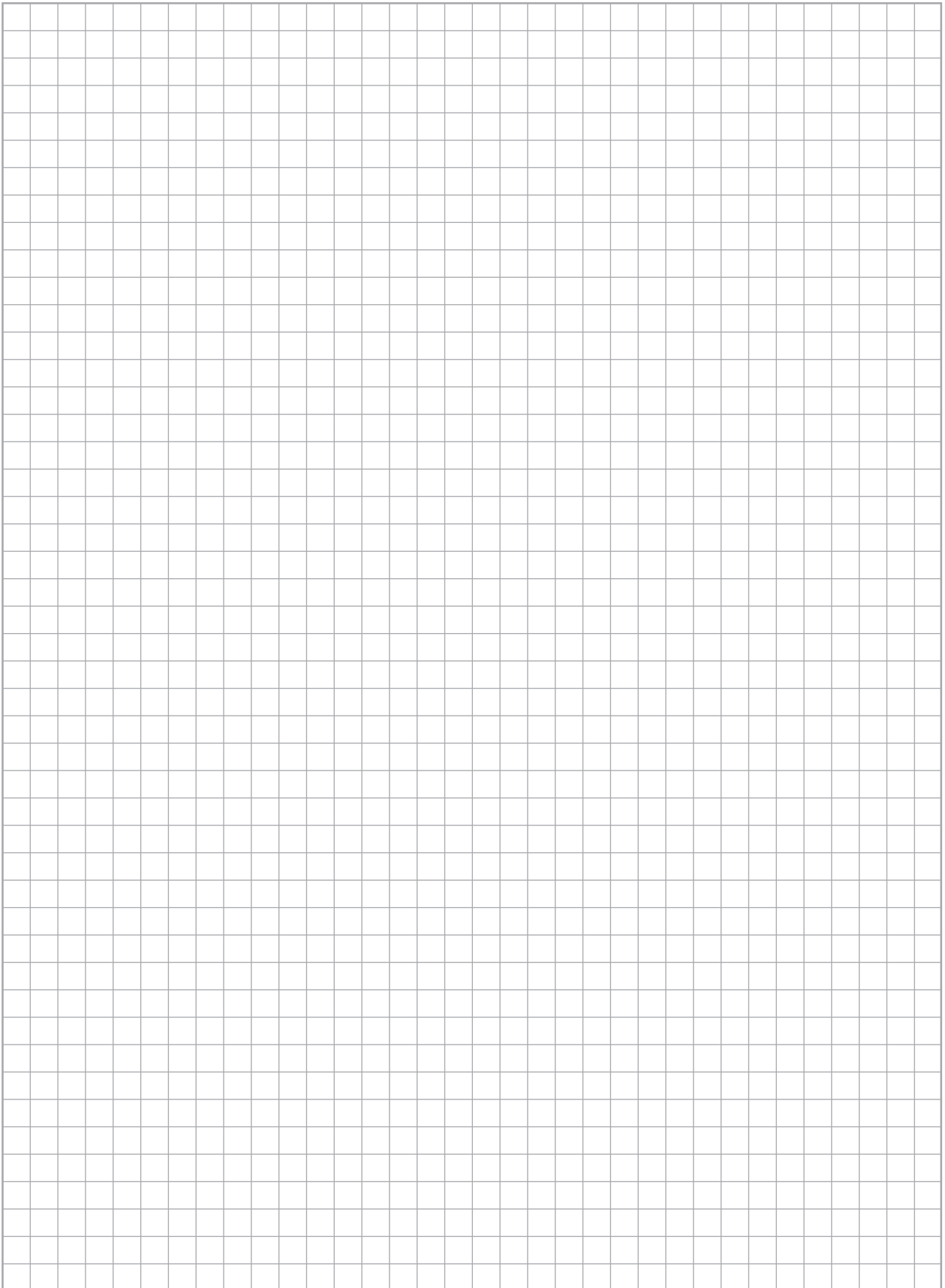
The manufacture of the dock leveller has been as such that the disassembly shall need to be performed by qualified personnel. Lindab cannot be held liable and / or responsible for

any unjust or incorrect disassembly as performed by third parties. With regard to the materials as used for the production of the system no specific circumstances or procedures need to be taken into consideration with regard to removal and processing. All parts are to be removed in accordance with the at that time valid environmental regulations.

Notes



Notes





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Lindab Coverline for roof and facades is the best solution for agricultural and industrial buildings.

The sheets are available in many types of profiles and colours which can easily be combined and offer a great number of possibilities. A strong and durable solution.



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For more information:
www.lindab.dk



Lindab Profil A/S

Tlf. (+45) 73 99 73 73
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